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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,610	08/25/2003	Qinbai Fan	GTI-1429-CIP	2842

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EXAMINER

MERCADO, JULIAN A

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,610

Applicant(s)

FAN ET AL.

Examiner

Julian Mercado

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8-26-03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

The Information Disclosure Statement filed on August 26, 2003 has been considered by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8, 10 and 12-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Hornung et al. (U.S. Pat. 6,300,001 B1).

Regarding claims 1-8, 10 and 12-17, Hornung et al. teaches a fuel cell stack having a bipolar plate and/or current collectors made of a chromium-nickel austenitic alloy, with chromium and nickel combined at 10.5—21.0 % to 51.0—87.0 % by weight, with the alloy further comprising C, *inter alia*. See col. 1 line 61 et seq., see also col. 3 line 3-6. Thus, at least at the highest amounts of chromium and nickel, 51.0—87.0 % by weight meets the claimed at least about 50% by weight of the alloy. Similarly, nickel is greater in weight percentage than chromium to the extent that the highest amount of nickel at the preferred 26 % by weight exceeds the preferred amount of chromium at 16.5% by weight. See col. 2 line 23 et seq. As to

Art Unit: 1745

a nitrogen content of zero, Hornung et al. teaches nitrogen in the amount of 0.0, at least when rounded to the nearest tenth. See col. 2 line 34. The examiner notes that the claim reads a “zero” amount of nitrogen and not a numerical wt. % amount. Additionally, the specification merely recites the “absence of nitrogen”, thus, the term “zero amount” has been given its broadest reasonable interpretation as set forth herein. See par. [0017] of applicant’s specification or par. [0019] of the corresponding U.S. Patent Application Publication 2004/0038104 A1.

Claims 7 and 17 require that the bipolar plate is not coated by a protective coating. There is no disclosure in Hornung et al. drawn to a protective coating, thus, it is asserted that this limitation is met by reference, absent of evidence to the contrary.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hornung et al. in view of Koncar et al. (U.S. Pat. 5,942,347).

The teachings of Hornung et al. are discussed above.

The examiner notes that regarding claim 11, which recites the graphite plate being molded directly onto at least one of the current collectors, this limitation has not been given patentable weight as the method limitation does not give breadth or scope to the product claim. The claimed product appears to be the same or similar to the prior art product insofar as being a

Art Unit: 1745

graphite plate resultantly adjacent a current collector. In the event that any differences can be shown by the product of the product-by-process claim, such differences would have been obvious to the skilled artisan as a routine modification of the product absent of a showing of unexpected results. *In re Thorpe*, 227 USPQ 964 (Fed. Cir. 1985).

Hornung et al. does not explicitly teach a bipolar graphite plate. However, Koncar et al. teaches bipolar graphite, i.e. separator plates for a fuel cell stack. See col. 3 line 11 et seq. The skilled artisan would find obvious to modify Hornung et al.'s invention by employing a graphite bipolar plate. The motivation for such a modification is enhanced water permeability and electronic conductivity of the stack, *inter alia*. (ib.)

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Art Unit: 1745

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-17 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,723,462 B2 (hereinafter the '462 patent), in view of Kanter (U.S. Pat. 3,754,899).

The '462 patent claims a fuel cell stack having a bipolar plate and/or current collectors made of a chromium-nickel austenitic alloy, with chromium and nickel combined at least at about 50% by weight, with nickel comprising greater than 32% to 38%.

The '462 patent does not recite nitrogen at a zero amount. However, Kanter teaches an austenitic alloy which is substantially free from nitrogen, present at a zero amount, e.g. 0.0 (rounded to the nearest tenth). See col. 3 line 46-54. Thus, the skilled artisan would find obvious to modify the '462 patent by ensuring a zero amount of nitrogen. The motivation for such a modification would be to stabilize the alloy at elevated temperatures. (ib.)

Art Unit: 1745


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



jam



PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER